

IN THE CLAIMS:

Please find below a listing of all pending claims. The statuses of the claims are set forth in parentheses. For those currently amended claims, underlined emphasis indicates insertions and ~~strike through~~ emphasis (and/or double brackets) indicates deletions.

1. (Currently Amended) An interface device, comprising:
an Ethernet frame and a synchronous optical network ~~[[SONET]]~~ frame convertible interface device, wherein a 1st holding part with a ~~specific~~ VLAN identifier of said Ethernet frame and a ~~[[STS]]~~ path identifier of said synchronous optical network ~~[[SONET]]~~ frame are placed opposite each other; and
a plurality of multiplexers of the interface device ~~multiplexing parts~~, each of which can be ~~[[is]]~~ established corresponding to a ~~[[STS]]~~ path identifier of said synchronous optical network respectively and each of which is operable to multiplex an Ethernet frame having said specific VLAN identifier corresponding to said specific ~~[[STS]]~~ path identifier that is held by said 1st holding part among a plurality of input Ethernet frame VLAN identifiers;
wherein said each multiplexer ~~multiplexing part~~ establishes a filtering part that passes through Ethernet frames having said specific VLAN identifier among a plurality of Ethernet frames and a 1st encapsulating part that encapsulates information data contained in an Ethernet frame that passes through a filtering part, and said filtering part breaks down the frame when a VLAN identifier of the frame is different from any one of the VLAN identifiers that is held by said holding part.
2. (Currently Amended) The interface device according to claim 1, wherein the multiplexer ~~multiplexing part~~ establishes an ID inserting part that inserts an opposing synchronous optical network ~~[[SONET]]~~ transmission device ~~[[STS]]~~ path identifier that opposes an Ethernet frame that is encapsulated by a 1st encapsulating part.
3. (canceled)

4. (Currently Amended) A transmission system, comprising:

a plurality of synchronous optical network ~~[[SONET]]~~ multiplex and demultiplex ~~isolation~~ devices having Ethernet interface devices and synchronous optical network ~~[[SONET]]~~ interface devices established, wherein a 1st synchronous optical network ~~[[SONET]]~~ multiplex and demultiplex ~~isolation~~ device among the plurality of synchronous optical network ~~[[SONET]]~~ multiplex and demultiplex ~~isolation~~ devices establishes a 1st holding part with ~~[[a]]~~ an Ethernet frame specific VLAN identifier and a synchronous optical network ~~[[SONET]]~~ frame specific ~~[[STS]]~~ path identifier placed opposite each other;

a plurality of multiplexers ~~multiplexing parts~~, each of which is established corresponding to a ~~[[STS]]~~ path identifier respectively and each of which can be ~~[[is]]~~ operable to multiplex a plurality of Ethernet frames having a specific VLAN identifier corresponding to the specific ~~[[STS]]~~ path identifier that is held in the 1st holding part among an input plurality of Ethernet frame VLAN identifiers, along with a 2nd synchronous optical network ~~[[SONET]]~~ multiplex and demultiplex ~~isolation~~ device among the plurality of synchronous optical network ~~[[SONET]]~~ multiplex and demultiplex ~~isolation~~ devices with a 2nd holding part with the synchronous optical network ~~[[SONET]]~~ frame specific ~~[[STS]]~~ path identifier and Ethernet frame specific VLAN identifier placed opposite each other; and

a demultiplexer ~~an isolation part~~ that imparts a VLAN identifier corresponding to the ~~[[STS]]~~ path identifier that is held in the 2nd holding part to each extracted Ethernet frame by extracting each Ethernet frame and the synchronous optical network ~~[[SONET]]~~ frame ~~[[STS]]~~ path identifier from a frame originating in the synchronous optical network ~~[[SONET]]~~ frame;

wherein the 1st ~~[[SONET]]~~ multiplex and demultiplex ~~isolation~~ device multiplexer ~~multiplexing part~~ inserting a flag that indicates an input side Ethernet frame transmission fault along with the 2nd synchronous optical network ~~[[SONET]]~~ multiplex and demultiplex ~~isolation~~ device ~~isolation part~~ that prevents output of an Ethernet frame that

is transmitted by detection of the flag from a frame originating in the synchronous optical network [[SONET]] frame;

a filtering part that breaks down a frame when a VLAN identifier of the frame is different from any one of the VLAN identifiers that is held by the holding part.

5. (Currently Amended) A frame transmission method for frame transmission for an Ethernet frame and synchronous optical network [[SONET]] frame in a node, comprising:

inputting ~~a plurality of an Ethernet frame frames~~ having a ~~specific~~ VLAN identifier corresponding to a path identifier of a synchronous optical network to give the path identifier to the Ethernet frame in the node among the plurality of Ethernet frames passes through to be multiplexed;

breaking down a frame using a filtering part when a VLAN identifier of the frame is different from any one of the VLAN identifiers that is held by the holding part; and

establishing a ~~plurality of multiplexer multiplexing parts~~ corresponding to a [[STS]] path identifier of said synchronous optical network, each of which is operable to multiplex an Ethernet frame.